



RESEARCH STRATEGY

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¹ Approval must be by the same structure that approved the initial policy.

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RESEARCH STRATEGY

1. PREAMBLE

The University of Johannesburg's (UJ) Strategic Plan commits the university to distinguished scholarship and reputable research and innovation, and the promotion of internationally competitive research as a core strategic goal. To ensure that South Africa can compete in a globally competitive environment, this commitment to research is aligned with the national imperative to encourage more postgraduate studies, to increase the production of both traditional research outputs (as defined by research articles, books, book chapters, and conference proceedings) as well as creative outputs and innovations (as stipulated in the *Policy on the evaluation of creative outputs and innovations produced by public higher education institutions (2017) of the Department of Higher Education and Training*). The 2025 Strategic Plan: Global Excellence and Stature (GES)² also aims to expand the pool of researchers that can contribute to knowledge production and generation in our society.

As the University positions itself as a leader in the 4th Industrial Revolution (4IR), particularly on the African continent, it is important that our research and innovation support programmes and instruments take advantage of the benefits provided by increased use of technology. This includes, among other things, the automation of processes such as applications for research grants, awarding of research grants, reporting on research outputs, monitoring of research activities among others. Critical to the success of this move, however, is the provision of an enabling research environment and skilling of support staff and academics to be able to respond adequately to the changes brought by the 4IR.

The purpose of this document is to:

- present a framework for the management, support and development of research and innovation at the UJ,
- align with the GES research and innovation strategic objectives, and
- provide an approach for strategic operationalisation.

The responsibility for the implementation of the research strategy resides with the Deputy Vice-Chancellor associated with the research and innovation portfolio and the Executive Director: Research and Innovation. Such responsibility is exercised through the University Research Committee (URC), which functions in accordance with the authority delegated to it by Senate. The Research and Innovation Division is responsible for implementing the strategy and exercising institutional-level responsibilities and functions, while the

² <https://www.uj.ac.za/about/Documents/Strategic%20Plan%202025.pdf>

faculties³ take ownership of and manage research (hereinafter, the “research” reference includes both creative outputs and innovations) operations.

The following definitions of different types of research apply:

Research and development is “creative work undertaken systematically to increase the store of knowledge, including knowledge of humanity, culture and society, and the use of this knowledge to devise new applications”.

Basic research is “experimental or theoretical work undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts, without any particular application or use in view”. (OECD definition).

Strategic research (also known as oriented research) is “research carried out with the expectation that it will produce a broad base of knowledge likely to form the background to the solution of recognised or expected current or future problems or offer possibilities for solving them”.

Applied research is “original investigation in order to acquire new knowledge”. It is, however, directed primarily towards a specific practical aim or objective. The results of applied research are intended primarily to be valid for a single or limited number of products, operations, methods, or systems. The knowledge or information derived from applied research may be patented or suitably protected but may also be kept secret.

Multi-disciplinary research is “work/projects undertaken by a team of researchers from different disciplines or fields or different specialist areas within a discipline”. As part of the GES⁴ 4.0 Catalytic Initiative, the University aims to promote “multi-disciplinary 4IR projects, ideally including Humanities, Arts and Social Sciences and Science, Engineering and Technology components, and that might not otherwise have been undertaken or might otherwise have been undertaken on a smaller scale”.

2. PURPOSE OF RESEARCH STRATEGY

The strategy outlines the guiding principles regarding the management, support, and development of research to all those involved in research at the University of Johannesburg. It applies to all temporary, fixed- term contract and permanent employees, as well as registered students and postdoctoral research fellows (PDRFs) of the University.

The purpose of the strategy is to:

³ Reference to faculties includes the College of Business and Economics (CBE)

⁴ GES = Global Excellence and stature

- 2.1 provide a framework for the governance of research and research development;
- 2.2 affirm research as a priority;
- 2.3 provide for continued high-level, effective, and efficient support for research;
- 2.4 ensure the fair treatment of all researchers, staff, PDRFs, and students;
- 2.5 ensure effective communication (internally and externally) about the principles and policies on which the research activities of the University are founded;
- 2.6 establish rational, transparent, and collective decision-making processes around the allocation of research funds and other kinds of support for research;
- 2.7 balance the needs of research capacity development against those of established researchers;
- 2.8 integrate support for postgraduate research into the main research system;
- 2.9 appropriately integrate aspects of the 4IR into the research support system, including systems automation; and

3. PRINCIPLES OF THE RESEARCH STRATEGY

- 3.1 The Executive Deans of faculties (and the researchers within the faculties) are responsible for the management of research. Where the research is conducted outside of faculties, the Executive/Senior Director to whom the researcher ultimately reports is responsible (together with the researcher) for the management of research. The Research and Innovation Division, in consultation with the Executive Director: Research and Innovation and the Deputy Vice-Chancellor (research portfolio), is responsible for the provision of research support and the exercise of institutional-level responsibilities and functions in accordance with relevant university policies and regulations.
- 3.2 Support is provided both for sustaining and promoting the research activities of established researchers, as well as for the development of emerging researchers. By default, the approach is intended to create an enabling ecosystem for research.
- 3.3 Material and in-kind support for postgraduate (masters and doctoral) students and PDRFs is imperative for creating an enabling research environment.

- 3.4 Requests for support of research projects or activities are evaluated on the merits of the proposal, the merits of the applicant, the need for research capacity development, and the need to sustain existing research activities or capacity.
- 3.5 Applications to the central fund (via the faculty to the URC) are expected to adhere to a funding cycle, and applications are only considered outside this cycle, subject to budget availability, where faculties advance good reasons for such applications.
- 3.6 Faculties are responsible in the first instance to provide financial support for research activities, but if required, they will be assisted in this by the Research and Innovation division.
- 3.7 The extent of the URC's support for applications from a faculty is informed by the extent of the faculty's tangible commitment to research support and research output record.
- 3.8 Researchers not attached to faculties who seek financial support from the URC must be supported in their request by their Senior/Executive Director and must demonstrate the tangible commitment to research support of the unit or division within which the applicant functions.
- 3.9 All applicants requesting support from the URC need to show evidence of seeking funds outside the University, or need to provide a persuasive rationale why this is not feasible, in order for the application to be considered.
- 3.10 Postgraduate (masters and doctoral) bursary amounts from the central (internal) funds are standardised across the University, as well as the conditions attached thereto. Work-back obligations to often be pursued simultaneously with bursary or fellowship provision.

4. CUSTODIAN OF THE RESEARCH STRATEGY

- 4.1 The Executive Director: Research and Innovation, in consultation with the Deputy Vice-Chancellor: Research, Innovation and Advancement, the URC, and the faculties, is responsible for compiling and maintaining a research database, containing information about research activities by UJ staff and students in as accurate and comprehensive a form as possible.
- 4.3 The Executive Director: Research and Innovation, in consultation with the Deputy Vice-Chancellor (research portfolio), will contribute to the Annual Stakeholder Report that contains a summary of the nature and scope of the main research activities at the UJ, and reflects research achievements. In addition, there are contributions to other research and innovation electronic documents and portals.

- 4.4 The Senior Director: Revenue Administration (UJ Fundraising and Development Office), in consultation with the Executive Director: Research and Innovation & the Deputy Vice-Chancellor (research portfolio), is responsible for driving external funding campaigns at an institutional level and keeping a database of all strategic partnerships.

5. RESEARCH STRATEGY

The research strategy identifies the strategic research goals and the resources and actions required to achieve the stated goals. The strategic goals for research stated below, and the activities designed to achieve those goals, serve to give effect to the Research Mission statement and the concomitant core value. The proposed strategy has been informed by a range of imperatives both external and internal to the university and is reflective of the White Paper on Science, Technology, and Innovation (as adopted by Cabinet in March 2019).

5.1 STRATEGIC RESEARCH GOALS

- 5.1.1 Maintain and enhance the quality of research undertaken.
- 5.1.2 Enhance the institutional research profile and impact.
- 5.1.3 Increase/enhance, manage, and structure external and internal stakeholder relations and particularly for research funding.
- 5.1.4 Support and promote fundamental scholarship.
- 5.1.5 Support national, regional, and industry-specific research and development policies and strategies.
- 5.1.6 Maximise the impact and international recognition of UJ research.
- 5.1.7 Foster and expand strategic research partnerships and collaborative networks.
- 5.1.8 Capitalise on UJ intellectual property (IP).

5.2 ACTIONS REQUIRED TO ACHIEVE THE STRATEGIC GOALS

- 5.2.1 **Maintain and enhance the quality of research undertaken by creating an enabling environment for research**
- (i) Research and Innovation Division to provide and coordinate efficient institutional support systems for researchers to develop and maintain research quality and integrity;
 - (ii) assess, assure and promote research quality by Senate- and Faculty-controlled structures and the implementation of Senate- approved policies;
 - (iii) adopt effective and efficient research management systems;
 - (iv) implement peer-review processes;

- (v) recognise, encourage and reward research and innovation excellence by incentives such as the Vice Chancellor's Excellence Awards, recognition for IP disclosure, and increased publication, innovation, and creative output subsidy for researchers;
- (vi) review the performance of existing research structures and establish new centres/institutes and strategic programmes;
- (vii) in coordination with the International Office (IO), establish research collaborations and partnerships with national and international universities and research institutions;
- (viii) in coordination with the Postgraduate School (PGS) to facilitate, support, and coordinate postgraduate research activities;
- (ix) establish and implement career development pathways for researchers;
- (x) run adequately-resourced research-capacity development initiatives for emerging researchers at the institutional level;
- (xi) in coordination with the PGS, attract, retain and provide maximum support for postgraduate students and postdoctoral researchers; and
- (xii) in coordination with the IO, promote the international exchange of researchers at all levels.

5.2.2 Enhance the institutional research profile

- (i) update model for the adequate provision of internal university resources for research;
- (ii) provide faculties with financial contribution, infrastructural and human resources to develop and maintain institutional research capacity;
- (iii) maintain financial incentives for researchers to engage in high quality, internationally competitive sustained research activity and, especially, subsidized output⁵;
- (iv) enhance support for research mentorship structures for emerging researchers;
- (v) identify and encourage undergraduate students to embed research activities as part of their undergraduate study and together with the PGS, promote an approach for their continued stay or association with postgraduate and research activity;
- (vi) identify, encourage and provide support to staff to acquire at least a masters qualification through specialised academic programmes;
- (vii) establishing a staff-to-student ratio conducive to research productivity;
- (viii) in coordination with the PGS, increase the number of research students and PDRFs;
- (ix) in coordination with the PGS, enhance the postgraduate student profile and the throughput of the university;

⁵ By, e.g. individualised research funds, annual awards for research excellence and talent management

- (x) encourage inactive researchers to start becoming involved in productive research or to re-invigorate their past research endeavours, in alignment with the workload policy;
- (xi) include research output indicators in performance appraisals for Executive Deans and Heads of Departments;
- (xii) increase the number of rated researchers by the National Research Foundation (NRF);
- (xiii) provide institutional support to researchers to achieve and improve their NRF ratings; and
- (xiv) Establish Research Centres, Institutes, and Flagship programmes.

5.2.3 Increase external partnerships and funding for research

- (i) engage in dedicated and sustained partnership activity to identify and source external research funding opportunities, both national and international;
- (ii) leverage internal research funds to attract external research grants
- (iii) utilise internal research funds only for research activities that cannot be funded – or cannot be adequately funded – by external funds, and for strategic research interventions;
- (iv) prioritize some internal funds for emerging researchers; and
- (v) focus on specialised support for priority funding streams of the NRF, Technology Innovation Agency (TIA), European Research Council, Newton Fund programmes, etc.

5.2.4 Support and promote fundamental scholarship and basic research

- (i) promote an ethos of fundamental scholarship;
- (ii) develop fundamental scholarship skills in staff and students; and
- (iii) through outreach, promote public understanding and appreciation for research.

5.2.5 Support national, regional and industry-specific research and development policies and strategies

- (i) participate in appropriate national and international organisations that promote research;
- (ii) identify and develop institutional research strengths⁶ that complement national research strategies and priorities;
- (iii) identify and develop opportunities for relevant and applied research and knowledge production;

⁶Instead of research “strengths”, one might also refer to “focus areas”, “niche areas” or “themes”.

- (iv) establish and expand appropriate strategic research partnerships and collaborative networks; and
- (v) promote research capacity development of historically disadvantaged individuals through adequately-resourced initiatives at both institutional and faculty level.

5.2.6 **Maximize the impact and international recognition of UJ research**

- (i) encourage enhanced participation by researchers in national and international funding agencies;
- (ii) encourage enhanced participation by researchers in national research initiatives;
- (iii) encourage researchers to become part of international peer review circles such as those established by the European Union;
- (iv) timeously publicise research achievements and research initiatives widely (OR actively disseminate research results and achievements nationally and internationally);
- (v) encourage publication of research results in international journals, particularly those indexed by the Department of Higher Education and Training (DHET);
- (vi) encourage the production of quality creative outputs and innovations as recognised in the DHET's *Policy on the evaluation of creative outputs and innovations produced by public higher education institutions (2017)*;
- (vii) promote the international exchange of researchers at all levels;
- (viii) enhance social responsiveness and impact of UJ research
- (ix) establish and expand appropriate strategic research partnerships and collaborative networks;
- (x) increase the number of NRF-rated researchers; and
- (xi) provide institutional support to researchers to achieve and improve their NRF ratings.

5.2.7 **Capitalise on UJ IP**

With the Technology Transfer Office (TTO), implement the IP protection and commercialisation strategy, as provided for in the UJ IP Management Policy.

5.2.8 **Foster and expand strategic research partnerships and collaborative networks**

- (i) establish and expand appropriate strategic research partnerships and collaborative networks, both nationally and internationally, such as Universitas 21 (U21), The Association of Commonwealth Universities (ACU), etc.
- (ii) foster research partnerships and collaborations with science councils such as the Council for Scientific and Industrial Research (CSIR), MINTEK, MRC, ARC, national facilities, and other research entities.

- (iii) expand research collaborative networks with universities outside South Africa.

6. RESEARCH INTEGRITY - QUALITY AND ETHICS

- 6.1 Research integrity and ethics include the maintenance and promotion of the highest internationally recognised standards of scientific and research practice, of adherence to the highest ethical standards in research and postgraduate study supervision.
- 6.2 Research quality care is the responsibility of the Executive Dean of the faculty.
- 6.3 In accordance with the financial delegation of authority (DoA), applications for external research funds for which institutional commitments are required must be signed-off by the Deputy Vice-Chancellor (research portfolio) and⁷/or as per the DoA, on the recommendation of the relevant Executive Dean (or the person's nominee), before the application can be sent for external research funding.

External research funding applications, at times, come about on short notice and the time for legal review is impossible. For such or justifiable cases, in consultation with the domain executive, the application may be submitted with the following provision:

“In the case of a successful application/tender bid, the agreement will be finalised as per the UJ Corporate Governance / Legal Services process.”

- 6.4 All research agreements (except those undertaken within the context of approved private work) concluded by staff with external entities must be approved in consultation with, and be signed off, by the Deputy Vice-Chancellor (research portfolio) and ⁸ /or as per the DoA, on the recommendation of the relevant Executive Dean and/or Executive Director: Research and Innovation. Signed agreements should be archived through the UJ division: Corporate Governance (CG).

⁷ By default, the designated authority for sign-off of grant applications is the Executive director: Research and Innovation (ED: R&I); there are however applications, as required by external sponsors, that must be signed by the Deputy Vice-Chancellor or Vice-Chancellor – the approach must be managed accordingly and through advisory of the ED: R&I.

⁸ By default, the designated authority for sign-off of institutional-level grant applications is the Executive director: Research and Innovation (ED: R&I); there are however applications, as required by external sponsors or the financial DoA, that must be signed by the Deputy Vice-Chancellor, Chief Financial Officer (CFO), or Vice-Chancellor & Principal – the approach must be managed accordingly and through advisory of the ED: R&I and/or the Division: Legal Services.

By default, research agreements must follow the process for authorisation by the UJ division: legal services. Where consensus cannot be reached, the faculty must update the risk register and recommendation for sign-off can be made as per the financial DoA.

In the case however of nonbinding “agreements,” the contract owner, through the relevant executive, can recommend a document for sign-off (upon consideration by the appropriate signatory) with the following provision:

“The agreement does not create legally binding obligations for any party notwithstanding anything contained herein.”

- 6.5 The processes of the College/Faculty/Senate Research Ethics Committee must be followed for noting and/or approval before commencing with the research project activities.

Approved by Senate on 16 September 2020